

Title (en)

STRUCTURE OF GII.4 NOROVIRUS PROTEASE -DESIGN OF BROAD-SPECTRUM PROTEASE INHIBITORS

Title (de)

STRUKTUR EINES GII.4-NOROVIRUS-PROTEASE-DESIGNS VON PROTEASEINHIBITOREN MIT BREITEM SPEKTRUM

Title (fr)

STRUCTURE DE DÉFINITION DE PROTÉASE DU NOROVIRUS GII.4 D'INHIBITEURS DE PROTÉASE À LARGE SPECTRE

Publication

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Application

EP 17859201 A 20171005

Priority

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- US 2017055387 W 20171005

Abstract (en)

[origin: WO2018067847A1] The present disclosure concerns inhibitors of Norovirus protease that are suitable for use against any genotype of Norovirus, including at least GII.4 Norovirus proteases. In particular embodiments, specific compositions are encompassed, including their use for prevention or treatment of Norovirus infection in an individual.

IPC 8 full level

A01N 43/64 (2006.01); **A01N 37/36** (2006.01); **A01N 37/46** (2006.01); **A01N 43/90** (2006.01); **A01N 47/12** (2006.01); **A01N 47/28** (2006.01); **A01N 47/34** (2006.01); **A61K 9/00** (2006.01); **A61K 31/27** (2006.01); **A61K 31/395** (2006.01); **A61K 31/40** (2006.01); **A61K 31/407** (2006.01); **A61K 38/00** (2006.01); **A61K 45/06** (2006.01); **A61P 31/14** (2006.01); **C07C 201/00** (2006.01); **C07C 271/18** (2006.01); **C07C 271/22** (2006.01); **C07D 295/10** (2006.01); **C07D 498/08** (2006.01); **C07K 5/068** (2006.01)

CPC (source: EP US)

A01N 37/46 (2013.01 - EP US); **A01N 43/64** (2013.01 - EP US); **A01N 43/90** (2013.01 - EP US); **A01N 47/12** (2013.01 - EP US); **A01N 47/28** (2013.01 - EP US); **A01N 47/34** (2013.01 - EP US); **A61K 9/0014** (2013.01 - EP US); **A61K 31/27** (2013.01 - EP US); **A61K 31/395** (2013.01 - EP US); **A61K 31/40** (2013.01 - EP US); **A61K 31/407** (2013.01 - EP US); **A61K 38/00** (2013.01 - EP US); **A61K 45/06** (2013.01 - EP US); **A61P 31/14** (2017.12 - EP US); **C07C 201/00** (2013.01 - EP US); **C07C 271/18** (2013.01 - EP US); **C07C 271/22** (2013.01 - EP US); **C07D 207/06** (2013.01 - EP US); **C07D 295/10** (2013.01 - EP US); **C07D 405/06** (2013.01 - EP US); **C07D 498/08** (2013.01 - EP US); **C07K 5/06017** (2013.01 - EP US); **C07K 5/06026** (2013.01 - EP US); **C07K 5/06052** (2013.01 - EP US); **C07K 5/06086** (2013.01 - EP US); **G16B 15/30** (2019.01 - US); **G16C 20/50** (2019.01 - US)

C-Set (source: EP US)

1. **A61K 31/407 + A61K 2300/00**
2. **A61K 31/395 + A61K 2300/00**
3. **A61K 31/40 + A61K 2300/00**
4. **A61K 31/27 + A61K 2300/00**

Citation (search report)

- [A] WO 2013166319 A1 20131107 - UNIV KANSAS STATE [US], et al
- [X1] LISHENG DENG ET AL: "Synthesis, activity and structure-activity relationship of noroviral protease inhibitors", MEDCHEMCOMM, vol. 4, no. 10, 3 September 2013 (2013-09-03), United Kingdom, pages 1354, XP055475980, ISSN: 2040-2503, DOI: 10.1039/c3md00219e
- [A] ROBERT J. HUSSEY ET AL: "A Structural Study of Norovirus 3C Protease Specificity: Binding of a Designed Active Site-Directed Peptide Inhibitor", BIOCHEMISTRY, vol. 50, no. 2, 18 January 2011 (2011-01-18), pages 240 - 249, XP055664238, ISSN: 0006-2960, DOI: 10.1021/bi1008497
- [A] SIVAKOTESWARA RAO MANDADAPU ET AL: "Potent inhibition of norovirus 3CL protease by peptidyl -ketoamides and -ketoheterocycles", BIOORGANIC & MEDICINAL CHEMISTRY LETTERS, PERGAMON, AMSTERDAM, NL, vol. 22, no. 14, 11 May 2012 (2012-05-11), pages 4820 - 4826, XP028504453, ISSN: 0960-894X, [retrieved on 20120526], DOI: 10.1016/J.BMCL.2012.05.055
- [A] WEERAWARNA PATHUM M ET AL: "Structure-based design and synthesis of triazole-based macrocyclic inhibitors of norovirus protease: Structural, biochemical, spectroscopic, and antiviral studies", EUROPEAN JOURNAL OF MEDICINAL CHEMISTRY, ELSEVIER, AMSTERDAM, NL, vol. 119, 25 April 2016 (2016-04-25), pages 300 - 318, XP029563751, ISSN: 0223-5234, DOI: 10.1016/J.EJMECH.2016.04.013
- [A] VISHNU C. DAMALANKA ET AL: "Oxadiazole-Based Cell Permeable Macrocyclic Transition State Inhibitors of Norovirus 3CL Protease", JOURNAL OF MEDICINAL CHEMISTRY, vol. 59, no. 5, 29 January 2016 (2016-01-29), US, pages 1899 - 1913, XP055415445, ISSN: 0022-2623, DOI: 10.1021/acs.jmedchem.5b01464
- See references of WO 2018067847A1

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DOCDB simple family (publication)

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DOCDB simple family (application)

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